

Early Warnings for All/Emergency Telecommunications Cheat Sheet

[Q3 2025]

I. Overall key points:

1. ITU has assisted 41 countries in developing National Emergency Telecommunication Plans (NETP), which are crucial to use Information and Communication Technologies (ICT) for disaster management and serve as the foundation to implement Early Warning Systems (EWS). Additionally, ITU has developed two regional NETP models to support countries in tailoring and implementing their own NETPs based on their specific needs and priorities.
2. Cell broadcast systems: The implementation of cell broadcast to disseminate early warning alerts using mobile networks, as part of the implementation of national EWS can help countries make great progress for last-mile connectivity.
 - [ITU research](#) shows that 45 countries have implemented, and a further 13 countries are developing mobile-based EWS, through either cell-broadcast or location-based SMS.
3. [Disaster Connectivity Map](#) (DCM): ITU activated these maps in multiple countries following disasters to identify communication gaps and guide response efforts, such as in Grenada and St Vincent and the Grenadines after Hurricane Beryl and for Kenya and Tanzania after Cyclones Hidaya and Laly respectively.
4. ITU has deployed satellite equipment to [various countries](#), to support disaster relief efforts. Assistance for Jamaica, Saint Vincent and the Grenadines, and Mozambique were the most recent that ITU provided.

II. Early Warnings for All initiative

ITU works with WMO, UNDRR and IFRC through this initiative of the UN Secretary-General, with the aim of ensuring that every person on Earth is protected by an EWS.

1. **Objective:** To ensure that every person on Earth is protected by an EWS.
 - Global coverage: Aims to provide universal coverage, especially focusing on vulnerable and remote communities.

- Technology integration: Utilizes advanced technologies such as satellite communication, mobile networks, and data analytics to enhance EWS.
- Collaboration and coordination: Involves a wide range of stakeholders, including governments, international organizations, private sector, and civil society.
- Multi-hazard approach: The initiative addresses various hazards, including hydrometeorological, climatological, and related environmental events.

2. Four Pillars:

- Pillar 1: [Disaster risk knowledge](#): Understanding and mapping risks. [Led by UNDRR]
- Pillar 2: [Detection observation, monitoring, analysis, and forecasting](#): This pillar focuses on ensuring the availability of accurate and timely information to generate reliable warnings that can be effectively disseminated to end users. . [Led by WMO]
- Pillar 3: [Warning dissemination and communication](#): This pillar focuses on ensuring the timely and effective communication of warnings through all available communication channels to all people at risk. [Led by ITU; supported by IFRC, REAP, UNDP and WMO as pillar implementation partners]
 - ITU continues to work closely with GSMA in engaging with mobile operators
 - During COP28, ITU together with GSMA launched the [call to action to deploy cell broadcast and location-based SMS](#), many MNOs, including VEON, KDDI, Globe, Safaricom, Telefonica, MTN, and Axiata Group, have responded to the call and committed to utilizing digital connectivity to save lives. As of Q3 2025, 20 MNOs have participated.
 - ITU is engaging with the satellite industry
 - The Global Satellite Operators Association (GSOA) and its partners, during COP28, have [committed to enhancing direct-to-handset services and overcoming challenges](#) through cross-sector collaboration, including engaging with device manufacturers, standardization bodies, and other key

stakeholders. We are also working with the EU (Galileo project) and some other partners (including ESA) to see how EW4All can benefit from their work.

- Pillar 4: [Preparedness and response capabilities](#): This pillar focuses on building the capacity of communities and authorities to better understand the early warnings and to respond effectively to imminent disasters. [Led by IFRC]

3. AI for EW4All

The [AI Sub-group of EW4All](#), led and coordinated by ITU, is a global platform of 120+ members harnessing AI-driven technologies to bridge gaps in EWS and to ensure that everyone, everywhere, is covered by life-saving early warning alerts.

- [Early Warning Connectivity Map](#) (EWCM) is a flagship example, developed by ITU in partnership with Microsoft AI for Good Lab, the Institute for Health Metrics and Evaluation (IHME) at the University of Washington, and Planet Labs. The EWCM uses AI and satellite imagery to generate high-resolution population density maps that enables governments and partners to identify the population not covered by digital networks, and to design tailored dissemination strategies and make targeted investments.
- The AI Sub-group hosted the [AI for EW4All Innovation Challenge](#) and launched an [AI Solutions Spotlight](#). The sub-group is also expected to launch an AI Solutions Catalog.
- The group is open to interested individuals and organizations who would like to help us advance the use of AI in EWS and support piloting in countries. If you wish to engage, send us an email at ew4all@itu.int

4. Monitoring the implementation of the initiative through:

- [The Global Status of Multi-Hazard Early Warning Systems 2023 report](#): outlines the progress that has been made under the EW4All initiative. Highlight good practices through case studies and examples of both global and regional initiatives.
- [Early Warnings for All dashboard](#): tracks progress through global and implantation indicators, and details country capacity information.

5. Priority countries

- The EW4All initiative has started to roll out in 30 particularly at-risk countries identified, including Small Island Developing States and Least Developed Countries. Additional countries are expected to be added as this vital work with partners gathers pace, scale, and resourcing.

Asia and Pacific:

Bangladesh, Maldives, Nepal, Lao (People's Democratic Republic), Cambodia, Kiribati, Samoa, Solomon Islands, Fiji, Tonga

Africa:

Djibouti, Somalia, Sudan, Chad, Comoros, Ethiopia, Liberia, Madagascar, Mauritius, Mozambique, Niger, South Sudan, Uganda

Latin America and Caribbean:

Guyana, Haiti, Barbados, Antigua Barbuda, Guatemala, Ecuador

Central Asia:

Tajikistan

- The EW4All Pillar 3 checklist assessment has been conducted in 24 SIDS/LDCs.
 - An initial assessment to determine each country's status on warning dissemination and communication.
 - ITU's work in progress (*the list below only accounts for the support provided since January 2025*):
 - [30 countries](#) supported under EW4All
 - [7 cell broadcast feasibility studies](#) – currently only about 45 countries deploy cell broadcast. We are helping countries become cell broadcast-ready
 - 1 regional cell broadcast feasibility study for the Pacific Islands
 - [8 countries](#) provided with CAP support, includes training and technical support
 - [10 national EWS roadmaps](#) which integrate “warning dissemination and communication” angle